

CHAPTER 12. ENVIRONMENTAL ANALYSIS

Key Points

- For the purposes of the California Environmental Quality Act (CEQA), the proposed project consists of:
 - Adoption of the Shasta River TMDL Action Plan as a Basin Plan amendment.
- The project is categorically exempt from the provisions of CEQA that require an initial study, environmental impact report, and a negative declaration.
- Other relevant provisions of CEQA and State Water Board regulations require that amendments to a Basin Plan comply with the functionally equivalent substitute environmental process, including:
 - Holding a scoping meeting, and preparation of:
 1. a substitute environmental document,
 2. alternatives to the project,
 3. a CEQA Checklist,
 4. an analysis of individual and cumulative environmental impacts, and
 5. mitigation measures.
- A properly noticed CEQA Scoping Meeting was held on June 28, 2005, in Yreka, CA.
- This Staff Report serves as the substitute environmental document.
- Three alternatives are considered:
 - Alternative 1: No Action.
 - Alternative 2: Shasta River TMDL Action Plan as proposed.
 - Alternative 3: WDR-based Implementation Actions.
- Regional Water Board staff recommend Alternative #2.
- The CEQA Checklist is included as Appendix H.
- This chapter serves as the analysis of environmental impacts.
- The adoption of the proposed Shasta River TMDL Action Plan will not have a significant individual nor cumulative impact on the environment because the term “significant impact” is defined to include only adverse impacts. The environmental changes that will result from the proposed project are beneficial, not adverse.
- A description and analysis of mitigation measures is not required because there are no significant adverse impacts to be mitigated.

For the purposes of the California Environmental Quality Act (CEQA), the project consists of adoption of the proposed Shasta River TMDL Action Plan as a Basin Plan amendment.

The adoption of the proposed Shasta River TMDL Action Plan will not have a “significant impact on the environment,” because that term is defined to include only adverse impacts (14 CCR §15382). The environmental changes that will result from the proposed project are beneficial, not adverse. These statements are supported by the CEQA Checklist (Appendix H) and by the information presented in this Staff Report.

12.1 Functionally Equivalent Substitute Environmental Document

As discussed previously in this Staff Report, the Basin Plan amendment process has been certified by the Secretary for Resources as functionally equivalent to, and therefore exempt from, the CEQA requirement for preparation of an environmental impact report (EIR) or negative declaration and initial study (14 CCR §15251(g)). A substitute environmental document that is functionally equivalent to an EIR or negative declaration must be prepared, and must include a description of the proposed project and either a description of alternatives with mitigation measures to avoid significant adverse impacts or a statement showing that the project would have no significant adverse impacts. This entire Staff Report serves as the functionally equivalent substitute environmental document.

Other relevant portions of CEQA continue to apply, and State Water Board regulations require amendments to a Basin Plan to comply with a substitute environmental process. As part of this process, a Basin Plan amendment must include:

- Solicitation of public input, including holding a scoping meeting to assess the potential environmental scope of the CEQA analysis, and preparation of:
- A substitute environmental document;
- Alternatives to the project;
- A CEQA Checklist;
- An analysis of individual and cumulative environmental impacts;
- Mitigation measures.

The project has met these requirements. More information on these requirements is included in the following sections.

12.2 Scoping Meeting

The CEQA Scoping Meeting was held on June 28, 2005, in Yreka, California. A public notice of the meeting was sent out on May 13, 2005. Triplicate notices were inserted in newspapers throughout the North Coast Region beginning the week of May 15, 2005. In preparation for the Scoping Meeting, a plain English summary of the proposal was made available to interested parties and was posted on the North Coast Regional Water Board website.

Many of the comments received at the CEQA Scoping meeting concerned technical aspects of the initial proposal rather than the scope of the environmental review. The comments received at

the CEQA Scoping Meeting that concerned the scope of the environmental review are summarized in Table 12.1 below. These comments, and others, helped to shape the scope of the environmental review and specific aspects of the resulting proposal.

12.3 Alternatives and Staff Recommendation

This section identifies and analyzes reasonable alternatives to the recommended approach that address different ways to reduce nutrient and other oxygen consuming constituent waste discharges and elevated water temperatures in the Shasta River watershed. An analysis of reasonable alternatives is required by CEQA. Every conceivable alternative need not be considered – only those that would meet the project objectives and are reasonable. “The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects (14 CCR §15126.6(a)).”

Table 12.1: Comments and Responses from the CEQA Scoping Meeting

Scoping Factor	Comment	Response
Aesthetics	No Comments.	N/A
Agricultural Resources	Proposed project could result in conversion of farmland, to non-agricultural uses because the requirements will be so stringent that rural landowners will have to sell land for development.	No specific information was presented to demonstrate that the proposal was overly stringent. The information presented in this Staff Report indicates that the proposed implementation actions are not overly stringent. The proposal is authorized and required by existing state and federal laws. The Regional Water Board will work with landowners to develop inventories and help fund projects for cooperative landowners. The public will have time to come up with acceptable implementation alternatives. Landowner income and ability, as well as the source of problems will all be factored into specific time tables and practices to control low dissolved oxygen, nutrient and other oxygen-consuming constituent inputs and impacts to water temperatures.
Air Quality	No Comments.	N/A
Biological Resources	No Comments.	N/A
Cultural Resources	No Comments.	N/A
Geology and Soils	No Comments.	N/A
Hazards and Hazardous Materials	No Comments.	N/A
Hydrology and Water Quality	Increasing riparian vegetation may reduce instream water flows.	While this may be true in the short term, in the long term, increasing riparian vegetation can raise the water table thus increasing groundwater inputs. Additionally, staff is discussing the restoration of vegetation to natural levels only.

Table 12.1: Comments and Responses from the CEQA Scoping Meeting

Scoping Factor	Comment	Response
Land Use and Planning	Look at the effects of duplication of programs.	Duplication of efforts and overlap of regulatory programs is addressed in this Staff Report.
Mineral Resources	No Comments.	N/A
Noise	No Comments.	N/A
Population & Housing	No Comments.	N/A
Public Services	No Comments.	N/A
Recreation	No Comments.	N/A
Transportation and Traffic	No Comments.	N/A
Utilities and Service Systems	No Comments.	N/A

Factors that can be used to determine the feasibility of alternatives include: economic, social, environmental, legal, and technical. The analysis of alternatives must “include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project” (14 CCR §15126.6(d)).

In order to meet the project objectives, the selected alternative must provide the tools necessary to effectively control factors leading to low dissolved oxygen levels and elevated water temperatures across the Shasta River watershed so that the TMDLs are achieved, beneficial uses are protected, temperature and dissolved oxygen-related water quality objectives are attained, and water quality is preserved, enhanced, and restored. Each alternative is analyzed to determine potential consequences and how that alternative would or would not achieve the stated goals.

The following alternatives were considered:

- Alternative 1 No Action.
- Alternative 2 Shasta River TMDL Action Plan as proposed.
- Alternative 3 WDR-based Implementation Actions.

12.3.1 Alternative 1: No Action

The no action alternative retains the existing Basin Plan language and does not result in the proposed Basin Plan amendment.

Currently, the Shasta River watershed is not meeting water quality objectives as set out in the Basin Plan for the North Coast Region. Section 303(d) of the federal Clean Water Act requires that a list be developed of all impaired or threatened waters within each state. The Shasta River watershed is listed as impaired on the 303(d) list, as described in Chapters 1 and 2 of this Staff Report. The watershed is not only listed as impaired on the federal 303(d) list, but the listings have been confirmed by monitoring and data evaluation. Section 303(d) also requires that each state establish a total maximum daily load (TMDL) for any water body designated as water quality limited. A TMDL is the maximum amount of a pollutant that a water body can contain and still achieve water quality standards. When TMDLs are adopted into the Basin Plan, they must contain implementation strategies that establish how water bodies will attain and maintain water quality objectives and support designated beneficial uses.

The Regional Water Board has entered into an agreement with the U.S. EPA to complete a full TMDL action plan by a court ordered consent decree due date.¹ As part of this agreement, the U.S. EPA provides funding to the Regional Water Board. Under the no action alternative, a full and complete TMDL action plan would not be adopted and the U.S. EPA would be forced to establish the technical TMDLs for dissolved oxygen and temperature by the consent decree due date. Technical TMDLs established by the U.S. EPA lack implementation strategies, monitoring plans, reassessment strategies, antidegradation analyses, environmental analyses, and economic analyses. Without a comprehensive TMDL action plan, and an implementation strategy in particular, achievement of the TMDLs, attainment of water quality standards, and protection of the beneficial uses of the Shasta River is not likely to occur.

The no action alternative is technically feasible and does not require any change to the Basin Plan. This alternative, however, has already been demonstrated to be ineffective at controlling low dissolved oxygen levels, discharges of nutrients and other oxygen-consuming constituents, and increased water temperatures in the Shasta River watershed. Selecting the no action alternative would not result in any increased regulatory or economic burden to dischargers; however, the economic impacts of not addressing water quality impairments would be continued. The consequences of selecting this alternative may be the continued degradation of water quality and adverse impacts, both individual and cumulative, to beneficial uses with the attendant direct and indirect costs, such as the increased costs for water treatment, reduced commercial, recreational and subsistence fisheries, and degradation of recreational waters.

12.3.2 Alternative 2: Shasta River TMDL Action Plan

This alternative consists of amending the Basin Plan to add the Shasta River TMDL Action Plan as proposed.

The Regional Water Board identified low levels of dissolved oxygen and elevated water temperatures as water quality problems in the Shasta River watershed, and the watershed is listed as impaired on the federal Clean Water Act Section 303(d) list. The Regional Water Board is obligated to complete TMDLs in the Shasta River watershed to comply with a completion schedule agreed to with the U.S. EPA under the terms of a court ordered consent decree arising from the lawsuit of Pacific Coast Federation of Fishermen's Associations v. Marcus, as described in the previous section. To meet this schedule, the Shasta River TMDLs must be completed and adopted into the Basin Plan in 2006.

The goal of the proposed Basin Plan amendment is to establish the TMDL and describe the implementation actions necessary to achieve the TMDLs and attain water quality standards, including protecting the beneficial uses of water. The amendment does this by addressing the dissolved oxygen and temperature impairments in the Shasta River watershed specifically through implementation actions. The proposed implementation actions describe the steps that are necessary to prevent, minimize, and control total thermal, nutrient, and oxygen-consuming loads, and related factors such as flow that reduce assimilative capacity. The implementation actions are tailored for individual sources and land uses. Several of the implementation actions outline a process for coordination among stakeholders while others describe additional study needs. Other implementation actions focus on use of permitting and enforcement tools.

¹ Pacific Coast Federation of Fishermen's Associations, et al. v. Marcus, No. 95-4474 MHP, 11 March 1997.

The Shasta River TMDL Action Plan must be adopted in order to preserve, enhance, and restore the Shasta River watershed, support beneficial uses, and achieve and maintain water quality objectives. The result will be a proactive strategy to address low dissolved levels and excess water temperatures resulting from land use activities conducted in the watershed.

12.3.3 Alternative 3: WDR-Based Implementation Actions

This alternative consists of amending the Basin Plan to add the TMDLs as proposed (i.e., the dissolved oxygen and temperature source analyses, TMDLs, load allocations, and margins of safety), and a suite of implementation actions that would vary from those currently proposed. Specifically, the implementation actions would be more regulatory in nature and rely on formal permit mechanisms to prevent, reduce, and control factors leading to low dissolved oxygen levels and elevated water temperatures in the Shasta River watershed. The goals of such an alternate TMDL Action Plan would be the same: to achieve the TMDLs and attain water quality standards, including protecting the beneficial uses of water. This alternative would also meet consent decree deadlines.

As stated above, many of the implementation actions under this alternative would be similar but more regulatory in nature than currently proposed in Alternative #2. For example, permits in the form of waste discharge requirements (WDRs) or waivers of WDRs would be developed to address discharges of nutrients and oxygen-consuming constituents and sources of elevated water temperatures. Activities that remove or suppress vegetation that provide shade to a waterbody, and grazing activities would be regulated under WDRs or waivers of WDRs. It is possible that fine sediment sources originating from activities such as road construction, maintenance and grading activities would be added to this list of activities requiring WDRs or waivers in the future.

This alternative would meet the objectives of the project by ensuring that human activities that contribute to low dissolved oxygen levels and elevated water temperatures in the Shasta River watershed are prevented, reduced, and controlled so as to meet the TMDLs and attain water quality standards. WDRs and waivers of WDRs would allow for specific requirements on an individual landowner basis or a general land use basis, and would also include specific time lines and monitoring requirements. This alternative would also likely increase the compliance cost to landowners/dischargers, as WDRs require the submission of an annual fee to the State. The environmental analysis is similar to Alternative 2 because these same actions are contemplated in both alternatives, though with different timing and degree of certainty.

12.3.4 Staff Recommendation

Regional Water Board staff recommend Alternative #2 and the adoption of the Shasta River TMDL Action Plan.

12.4 CEQA Checklist

Following the CEQA Scoping Meeting, and the preparation of a specific proposal (the project), the CEQA Checklist was prepared. The CEQA Checklist is attached to this Staff Report as Appendix H.

12.5 Analysis of Environmental Impacts

The project does not consist of any activities that would adversely affect dissolved oxygen levels or water temperature. The project establishes a Shasta River TMDL Action Plan to control total thermal, nutrient, and oxygen-consuming loads, and related factors such as flow that reduce assimilative capacity. The proposed requirements will be incorporated into permitting requirements and authorities. The proposed project will not have an adverse impact, individual or cumulative, to the environment. The proposed project will, however, have a significant beneficial impact on the environment because it will improve water temperatures and dissolved oxygen levels in the Shasta River Basin.

Both voluntary and regulatory actions taken to improve water quality (as listed in Chapter 8) could potentially have temporary construction impacts to water quality. At a minimum, best management practices (BMPs) would be put in place to minimize water quality impacts. Depending on the activity, a permit and/or specific environmental (CEQA) review might be necessary prior to implementation. These projects will be evaluated on a case-by-case basis by the implementing agency. Management measures exist to minimize impacts to less than significant in most cases. An example of a potential impact that could be mitigated with management measures could be removal of a minor surface water impoundment. In this case, the short-term water quality impacts would be addressed by BMP implementation during structure removal. In this scenario as well as others, the temporary water quality impacts would be outweighed by the long-term benefits of water quality improvement.

The adoption of the proposed Shasta River TMDL Action Plan will not have a significant impact on the environment because the term “significant impact” is defined as an adverse impact with “... a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (14 CCR §15382).” The environmental changes that will result from the proposed project are beneficial, not adverse.

12.6 Mitigation Measures

As described above, adoption of the proposed Shasta River TMDL Action Plan will have a beneficial impact on the environment because it will improve dissolved oxygen levels and lower the temperature of waters of the state in the Shasta River watershed. The environmental changes that will result from the proposed project are beneficial, not adverse. A description and analysis of mitigation measures is not required because there are no significant adverse impacts, individual or cumulative, to be mitigated.